

JAN 2003 (1)



THE GOTHIC ARCADE HAFOD

ARCHAEOLOGICAL RECORDING AND INVESTIGATION



Report No. 2003/7

Report Prepared for:
HAFOD TRUST/FOREST ENTERPRISE PARTNERSHIP

CAMBRIA ARCHAEOLOGY

REPORT NO. 2003/7
PROJECT RECORD NO. 47286

JANUARY 2003

THE GOTHIC ARCADE
HAFOD

By

K Murphy

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THE GOTHIC ARCADE, HAFOD ARCHAEOLOGICAL RECORDING AND INVESTIGATION

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THE GOTHIC ARCADE, HAFOD ARCHAEOLOGICAL RECORDING AND INVESTIGATION

By K Murphy

Summary

Two masonry piers, the only surviving upstanding remains of a small picturesque structure dating to the 19th century and known as the Gothic Arcade, were recorded prior to their conservation. One pier was leaning dangerously and had to be dismantled and reassembled. Below ground remains discovered during the recording showed that the Gothic Arcade was originally a three-arched structure, as shown on a 1939 painting by John Piper, the only known illustration of the site. Enough evidence survived to indicate that the structure had been a summerhouse not just an eye-catcher.

Introduction

The structure now known as the Gothic Arcade probably dates to the earlier 19th century and lies on the south bank of the Afon Ystwyth, Hafod (National Grid Reference SN 77437356, Primary Record No 33026). It is a Scheduled Ancient Monument (CD172[CER]). Prior to this work the standing remains consisted of two c. 2.3m high masonry piers, one of which was leaning and propped. In February 2002, Cambria Archaeology received a request from Acanthus Holden Architects to provide a specification for the recording and investigation of the Gothic Arcade, as part of the Hafod Trust/Forest Enterprise Partnership's continuing restoration programme at Hafod. Cambria Archaeology were asked to record the standing remains and conduct some intrusive archaeological works in advance of a mason dismantling and reconstructing the leaning pier and re-pointing the other. Two specifications were provided (Appendix 1), one for recording and intensive site investigation and the other for recording and minimal investigation/ground disturbance. The Partnership decided on the minimal approach, with modifications, and so a revised specification (Appendix 2) was produced, and Scheduled Ancient Monument Consent applied for. Cadw: Welsh Historic Monuments granted consent on 4 September 2002 and work began in mid November. The mason was Jim Acres. Following initial recording and restoration a modification on the Scheduled Monument Consent was requested (Appendix 3) and Cadw granted this on 9 December 2002. The final recording and restoration was undertaken in mid December.

History

The site is poorly documented and its original name is not known: the name Gothic Arcade is a modern coinage. George Cumberland in his *An Attempt to Describe Hafod*, published in 1796, describes an unfinished walk (the New Walk) on the south bank of the Ystwyth, and although he does not mention the Gothic Arcade he records:

we should descend to the point where the whole Ystwyth is seen, pouring through one of the noblest masses of rock that can be imagined, worn, by the winters' floods, into a pleasingly irregular form

A star indicating a fine point of view is marked in the approximate position of the Gothic Arcade on the map accompanying Cumberland's description. Both Cumberland and the map have the walk continuing upstream past the Gothic Arcade. His viewpoint might either be an earthwork platform situated 8m to the west and 4m above the Gothic Arcade or a rocky platform, now mainly removed by Ystwyth floods, within the rocky gorge below (Fig. 1). As one had to descend to it, the latter is the more likely.

The Rev. Henry Thomas Payne in 1815 provides the only description of the Gothic Arcade, and this is equivocal, as he has it on the river's north bank:

The Walk bears afterwards on the left bank (this must be the north bank as Payne is proceeding upstream – KM) of the Ystwyth - ... As you advance the Channel of the River is narrow, and the Rocks which compose it are more worn and fantastic. Pass under a rude arch of stone where a pretty scene opens, and proceed till you cross a curious chain bridge from which you command a Cascade. We then pursue the same line downwards but on the opposite bank of the River.

Thomas Johnes reported in a letter of 1804 (*A Documented History of Hafod*, Letters vii) that he had finished the New Walk, and that he was planning the chain bridge or swing bridge referred to by Payne. However, 1815 is the last reference to the New Walk (and the Chain Bridge), and it is therefore likely that this circuit began to fall into disuse from this date. Thomas Johnes died in 1816. The New Walk on the south and north banks of the Ystwyth is shown on the 1st Edition 1:2500 map of 1888, although the section on the south side stops 70m short of the Gothic Arcade and that on the north side terminates at the Chain Bridge – the bridge itself is not shown.

John Piper's *Hafod: Nash Folly and Ystwyth Gorge 1939* (Ingrams and Piper 1983, illus 109) is the only known illustration of the Gothic Arcade (Illus. 1). This small highly stylised oil painting shows a grey structure of three gothic arches. The central arch is slightly wider and taller than those flanking it, and shading seems to show a bow-fronted structure.

Location and topography

The Gothic Arcade is an element of the New Walk (Fig. 1). On the south side of the Ystwyth the walk is badly decayed, with several long sections have slipped into the river. Where it survives it is a well engineered but grass covered and overgrown terrace or shelf 7m to 12m above the river, and up to 1.6m wide at its western end, but generally 0.7m to 1.1m wide. For approximately 55m west of the Gothic Arcade the walk runs on a rock-cut shelf, gently rising to the east. It is designed so that when approached from the west the arcade itself is hidden behind a rock outcrop and is not revealed until the walker is just a few metres distant from it. At the Gothic Arcade the path widens onto a terrace on which the structure is constructed. Fine views to the east up the narrowest point of the Ystwyth gorge towards and beyond the Chain Bridge 35m away are obtained from the Gothic Arcade. Immediately to the southeast of the structure a 1.5m high dry-stone revetment wall supports the walk where it passes over a break in the bedrock. The path then

continues along the crest of a steep break of slope towards the Chain Bridge. Just to the southwest of the Chain Bridge a rough path seems to descend to a lower level and leads to a viewing point immediately below the Gothic Arcade. Although the platform of this viewing point has been removed by floodwater, spectacular views up the Ystwyth gorge are still obtained from here. A rough path continues east from the Chain Bridge, but soon fades. Immediately to the south of the Chain Bridge a 0.4m wide terrace marks the line of a walk parallel to and 3m higher than the New Walk. Massive root-plate holes caused by fallen trees and slumping on the steep slope have removed sections of this path's route. Its eastern end/destination is not therefore known, but at its western end it seems to be heading for a platform/viewing point located 8m west and 4m above the Gothic Arcade. A worn earth path (possible a modern feature) leads off to the west from this platform across a steep slope that seems to have experienced some active erosion. However, 75m to the west of the viewing platform, a 0.5m wide terrace cut into a bedrock promontory indicates a more heavily engineered walk course. This terrace fades once off the promontory, but is evident again to the west where it follows a straight course for almost 150m.

Apart from the lower slopes close to the river and a clearing around the Chain Bridge the course of the New Walk is under a coniferous plantation.

Recording and site investigation

Prior to site recording and investigation the remains of the Gothic Arcade consisted of two masonry piers with a mound up to 0.6m high of collapsed masonry between them (Figs 2 – 4, and Illus. 2 – 9). Both piers were wrapped in plastic sheeting to protect them from the elements and the northwestern one was propped as it was leaning severely to the northwest. The whole had been built on a 5.5m wide terrace, with a cliff edge on the east side approximately 11m above the Afon Ystwyth. The terrace on the western side had been widened to accommodate the structure by excavating into the steep valley side. Apart from the two covered piers, the whole site was covered with a thick growth of sphagnum moss.

The protective sheets were removed and all four elevations of each pier drawn stone-by-stone at 1:10 scale. To allow for correct assembly once dismantled each stone on the northwestern, leaning, pier was numbered using a wax crayon and the drawings appropriated annotated. This pier was later dismantled and reassembled by Jim Acres, the appointed mason. It was planned to dismantle the pier to below foundation level so allowing reassembly on a firm footing. This would have required a limited amount of archaeological excavation immediately around the pier. However, the mason found that it was possible to leave the lowest few courses of masonry *in situ* and build off them. The two piers were identical in size, 0.60m square, with the northwestern one protruding approximately 2.40m from the rubble and the southeastern one 2.20m. Both were constructed from roughly squared blocks of local mudstone/siltstone, except for two block of randomly placed Oolitic limestone in the northwest pier and one block in the southeast pier. Gaps in the masonry extending halfway across the upper levels of the two facing elevations of each pier were the result of collapsing arches – a single arch-

springer-stone remained *in situ* on the northwest pier approximately 1.80m above the rubble ground surface. A mortar sample was taken from the southeast pier and analysed to ensure use of a correct mortar mix during reassembly and re-pointing. The results are shown in Appendix 4.

Moss from the rubble and an area surrounding the two piers was roughly removed, but care was taken not to disturb the fallen stone. Immediately more structural evidence was apparent. Two smaller square piers lay between the larger ones. Their eastern faces were in line with the eastern faces of the larger piers. The distance between the large southeast pier and the small south pier was 0.62m, that between the two small piers was 1.17m and that between the small north pier and the northwest pier was 0.65m. The base of the southern smaller pier protruded slightly through randomly collapsed masonry. It measured 0.32m north-south and 0.36m east-west. The base of the small northern pier was not visible, although a 0.80m length of collapsed masonry indicated its position and showed that its lower section had collapsed *en masse*. Following recording, the rubble over this pier base was removed to reveal the *in situ* stub, which was of identical dimensions as the south pier. Jim Acres restored the collapsed masonry of the northern pier up to approximately 1.2m high, and some of the loose stones were added to the south pier to better mark its position.

Moss removal clearly revealed the artificial c 1.5m high cut into the steep hillside c. 2m to the west of the piers. A short section of dry-stone walling showed that at least part of the cut face was stone-revetted, but further clearance work was not carried out for fear of destabilizing the loose slope. Dry-stone walling, composed in part of large slabs, ran from each of the main piers back into the artificially cut slope. Only a few courses of these walls survived, but stepped up into the slope, suggesting that they were once higher.

Discussion

The construction date of the Gothic Arcade is still open to debate. However, given that it formed an integral part of the New Walk it seems likely that Thomas Johnes built it in the early 19th century, perhaps in conjunction with the Chain Bridge. Payne's ambiguous description supports the presence of the Gothic Arcade in 1815.

The form of the structure is also questionable. Payne describes passing under a rude arch of stone, suggesting a structure straddling the walk, but there are clearly problems with his text. The evidence revealed in the 2002 work supports John Piper's painting of 1939 of a three arched structure with a larger central opening flanked by smaller openings, although with a flat façade unlike that suggested in the painting. The trouble taken to create a terrace to build the arcade on, the creation of a rear revetment wall to the terrace and side walls linking the main piers to the rear slope lend support to the structure having been a summerhouse or covered seat rather than a simple eye-catcher. Certainly, the masonry is sufficiently substantial to have supported a roof, perhaps a simple lean-to affair with the lower side resting on the bank to the west. Views through the central arch up the Ystwyth gorge towards the Chain Bridge would have been obtained from a seat placed centrally against the rear bank. A summerhouse in this location would have

provided shelter and a place to rest on the most distant section of the New Walk from Hafod Mansion.

References

Cumberland G 1796, *An Attempt to Describe Hafod*

Ingrams R and Piper J 1983, *Piper's Places*. London

Payne H T 1815, National Library of Wales Cwrt Mawr Ms 101C, transcribed by J Macve and reproduced in *A Documented History of Hafod*, Vol 2, an unpublished report by the Hafod Trust

APPENDIX 1. ORIGINAL SPECIFICATIONS

Option 1 – Stone Recovery and Excavation

Objectives

Aid the restoration of the monument through recovery and recording of all fallen stone.
Lead to a better understanding of the monument through archaeological excavation.
Assist in the reconstruction of the leaning masonry pier through accurate recording.

Introduction

This option allows for: the recording and dismantling of the leaning masonry pier; the recovery of all the fallen stone surrounding the upstanding remains; the archaeological examination of the upper surfaces any floors, paths and structural elements sealed beneath the fallen stone; and the excavation of the dismantled pier foundation to allow for reconstruction on new foundations.

Methodology

All recording will be undertaken as for a standard archaeological project. Elevations and sections will be at 1:10 and plans at 1:20. Colour and black and white photography will be used throughout and Cambria Archaeology's pro forma records will be used for written descriptions, indexes etc.

The Leaning Masonry Pier

It is assumed that because of its parlous condition this pier will be dismantled. For health and safety reasons this should be done prior to the stone recovery and excavation phase of the programme. Elevation drawings of the pier at 1:10 will be made and the structure photographed. A mason should then dismantle the pier in conjunction with the archaeologist. Each stone will be numbered prior to removal and its position noted on the elevation drawings. The stones will be stored close by under plastic sheeting ready for reassembly.

Stone Recovery

This exercise will be undertaken as for a standard archaeological excavation. The fallen stone will be recorded, numbered and excavated in layers. The numbered stones will be stored close by under plastic sheeting.

Archaeological Excavation

This is a continuation of the stone recovery phase. Removal of the fallen stone will reveal upper archaeological deposits such as floors, paths and wall foundations. This is a clear opportunity to recover information that will assist in the monument's interpretation. It is not intended to excavate these deposits, only to record and evaluate them. Following excavation a strategy will have to be devised for the protection of the exposed deposits..

Excavation of the Dismantled Pier Foundation

The foundation of the pier will be archaeologically excavated.

Reporting

It is likely that a considerable amount of information of interest to garden historians will be gained during this work. Therefore a report to publication standards will be produced.

Option 2 – Dismantling of the Leaning Pier and Excavation of its Foundation, and Recording of other Surface Remains

Objectives

Assist in the reconstruction of the leaning masonry pier through accurate recording, and recording of other surface remains.

Methodology

It is assumed that because of its parlous condition the leaning pier will be dismantled. Elevation drawings of the pier at 1:10 will be made and the structure photographed. A mason should then dismantle the pier in conjunction with the archaeologist. Each stone will be numbered prior to removal and its position noted on the elevation drawings. The stones will be stored close by under plastic sheeting ready for reassembly.

Following dismantling the foundation of the pier and an area of c. 0.5m around it will be archaeologically excavated to allow for the removal of the foundation and so provide a solid base on which to reconstruct.

In addition to the recording and dismantling of the leaning pier, recording of other surface remains will be undertaken, in particular the site of the known second column base. This recording will involve minimum surface disturbance – only moss and loose detritus (but not significant stones) will be removed in this process. A plan at 1:10 will be made of the remains.

A short report will be produced.

APPENDIX 2. REVISED SPECIFICATION

Objectives

To fully record by drawings and photographs the two surviving piers of the Gothic Arcade. To assist in the dismantling of the leaning pier and excavated its foundation. To provide information for the accurate reconstruction of the leaning pier.

Methodology

Elevation drawings of the two piers at 1:10 will be made and the structures photographed. The stones on the leaning pier will be numbered on the stones themselves (using Staedtler Special Markers) and on the drawings. Copies of the drawings will be supplied to the mason. A plan at 1:50 will be made. Mortar samples will be taken and analysed in order to inform the reconstruction process.

A mason should then dismantle the pier. The archaeologist will brief the mason on the drawings prior to dismantling.

Following dismantling, the foundation of the pier will be archaeologically excavated to allow for the removal of the foundation and so provide a solid base on which to reconstruct.

A project archive and a short report will be produced.

Timing

Ideally the recording should be undertaken one or two weeks prior to the dismantling of the leaning pier. Notice of two – three weeks to Cambria Archaeology should be sufficient.

Note: the leaning arcade is ‘wrapped up’ and shored. Detailed recording work will only be undertaken if health and safety issues are not compromised.

APPENDIX 3. REQUEST FOR MODIFICATION TO SCHEDULED MONUMENT CONSENT

Current position: The two standing piers have been fully recorded and the leaning one dismantled. During dismantling it was discovered that the foundations of the leaning pier were in good condition and could left *in situ*, and the pier rebuilt on them. Moss clearance over the rubble between and around the piers revealed more of the overplan of the arcade. Two slighter piers lie between the two extant ones, giving a three-arched front façade to the structure. The base of one of these, which protrudes through the fallen masonry, is approximately 30cm square and apparently in good condition. A length of the second, which is of similar size, has fallen in one section of about 1m long/high. In addition a short length of dry-stone wall was noted to the rear of the terrace/platform cut for the arcade, and short sections of dry-stone wall run from each extant pier to the rear of the terrace/platform. Overall, the limited amount of work so far undertaken suggests that the Gothic Arcade was a summerhouse, rather than just an eye-catcher. However, the current work leaves the monument in rather an unsatisfactory condition, as there are structural elements such as the fallen smaller piers that are vulnerable to erosion, but which could be restored to their original position.

Suggested variation within the current SMC: The intention is to restore some fallen elements of the structure and to ensure protection for those elements that cannot be restored to their original position. It is proposed to remove more moss and superficial soil deposits, rapidly 'clean' the site and produce a plan at 1:20. Removal of loose stones will be necessary. Where these stones are clearly part of one of the smaller piers they will be numbered and located on the plan prior to removal - or even left *in situ* ready for restoration in the piers. It is anticipated that it will only be possible to restore the fallen piers to 1.0m – 1.5m high. The majority of the fallen rubble therefore will be left where it fell. For protection this rubble will be covered with imported soil or other material. Conservation of the rear dry-stone revetment wall may be necessary, depending on its extent and condition.

K Murphy 27 November 2002

APPENDIX 4. MORTAR ANALYSIS

Analysis of mortar sample from Gothic Arcade, Hafod

Sample taken on 5 November 2002

Method: A c. 15g sample was taken from the loose, subsurface lime mortar of the northeast pier of the Gothic arcade. A 3g sub-sample of this was taken, gently crushed and the lime content dissolved in hydrochloric acid. The undissolved residue was then sieved and washed in a fine gauze and dried. The dried residue was too small to be weighted, but its volume was estimated. The residue was examined under a x10 hand lens.

Results: By estimation the residue constituted c. 10% of the total mortar mix. It consisted of c. 30% silts and fine sands (0.02mm-0.2mm); c. 60% dark grey, angular stone particles and occasional angular quartz particles (0.2mm-0.6mm); and c. 10% coarse, angular very small stones and quartz particles (up to 2mm). Although very small, the inclusions are consistent with them having been derived from the mudstones/siltstones and quartz veins that occur at Hafod. Examination of the main sample showed that there were no stones larger than 2mm.

Conclusion: The amount of non-lime sand and stones, c. 10% of the total sample, is too large to have been the result of accidental inclusion during mortar mixing or as a result of soil accumulation in the mortar since construction over 150 years ago. It is therefore likely that locally derived 'sands', perhaps from riverside deposits, were added to the mortar mix, in approximately the proportion 1 part 'sand' to 10 parts mortar.

K Murphy 6 November 2002

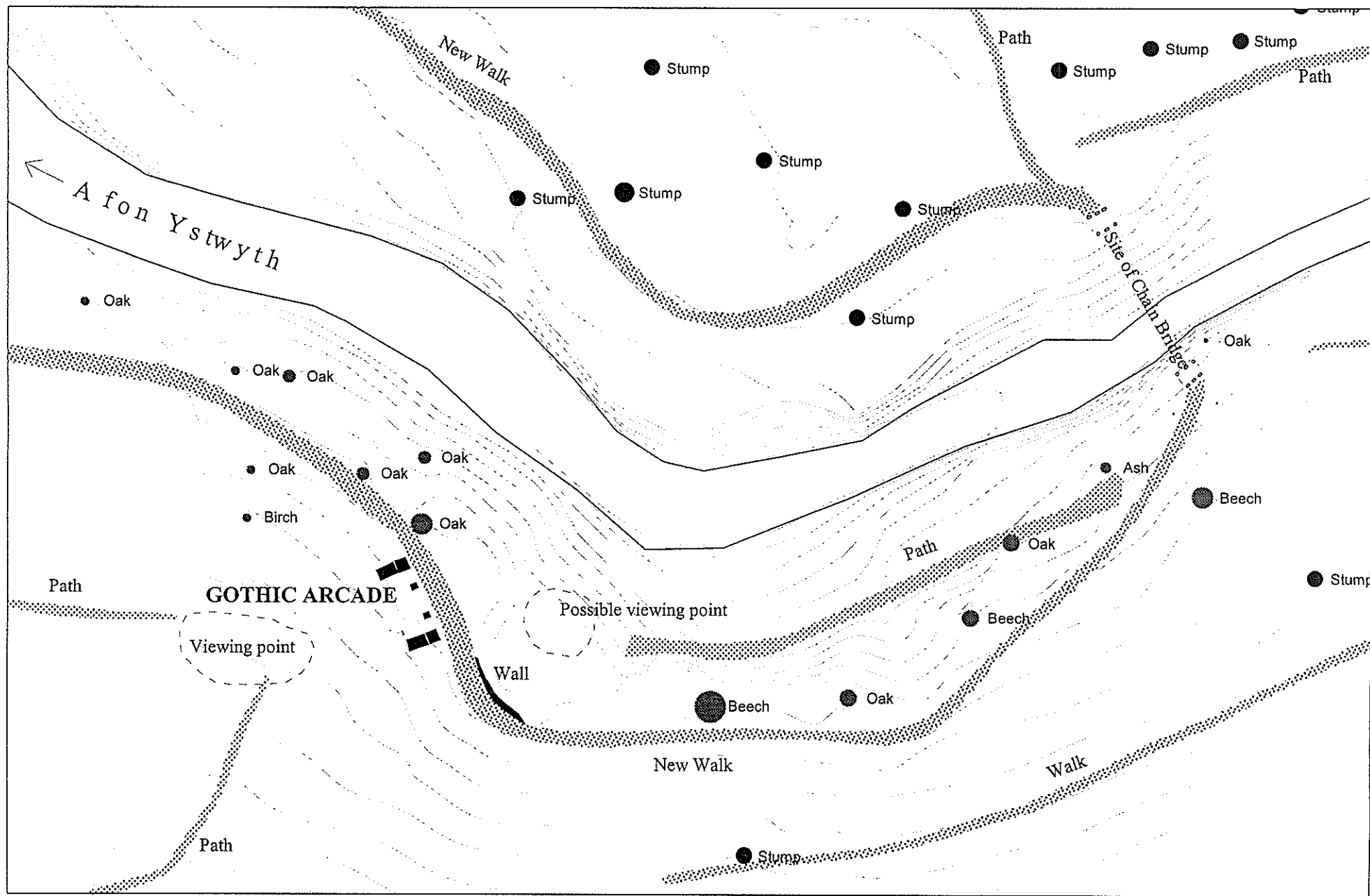


Figure 1. Location map. Scale 1:250. Contours at 1m intervals. North to top.

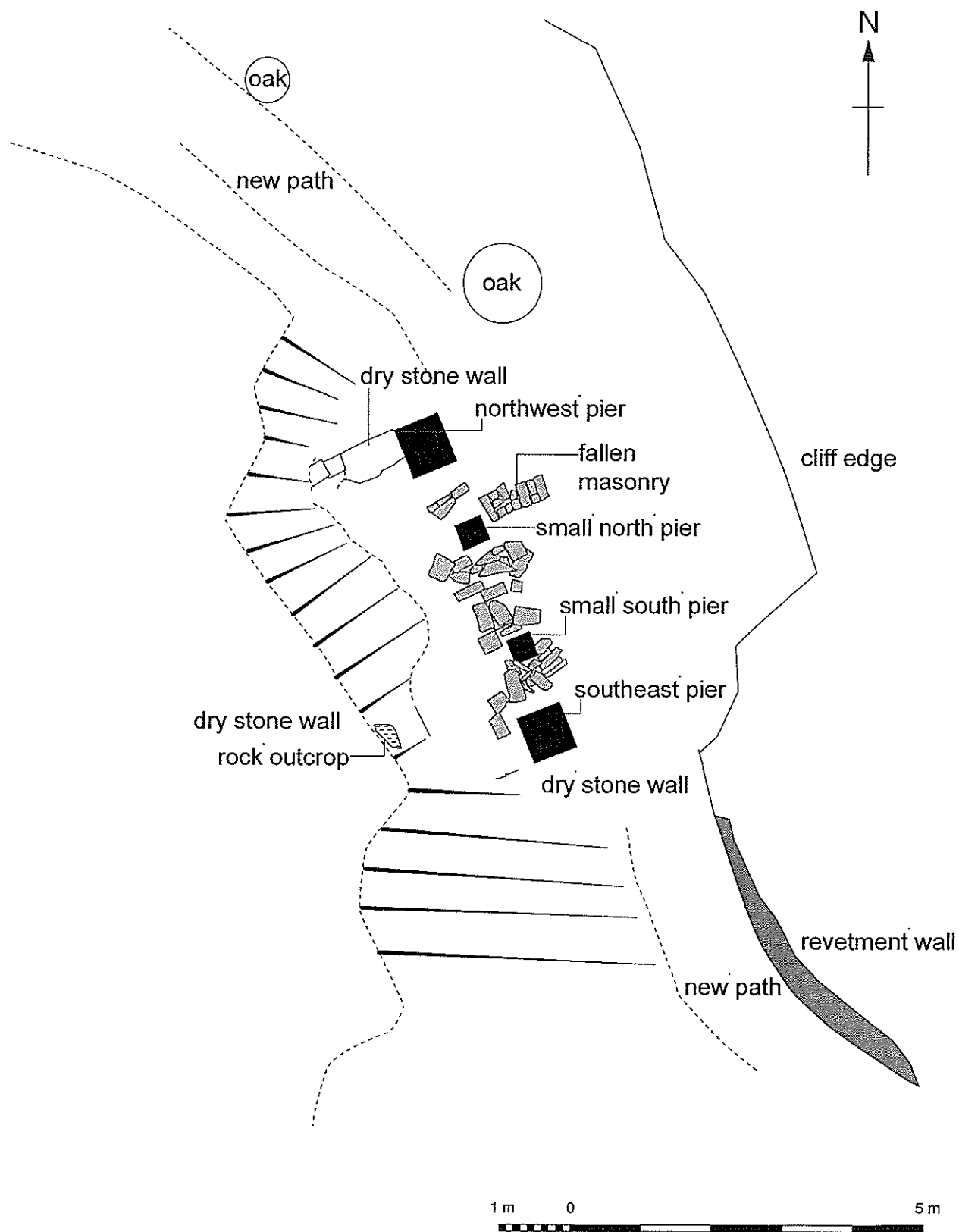


Fig. 2 Hafod : Gothic Arcade – Site plan

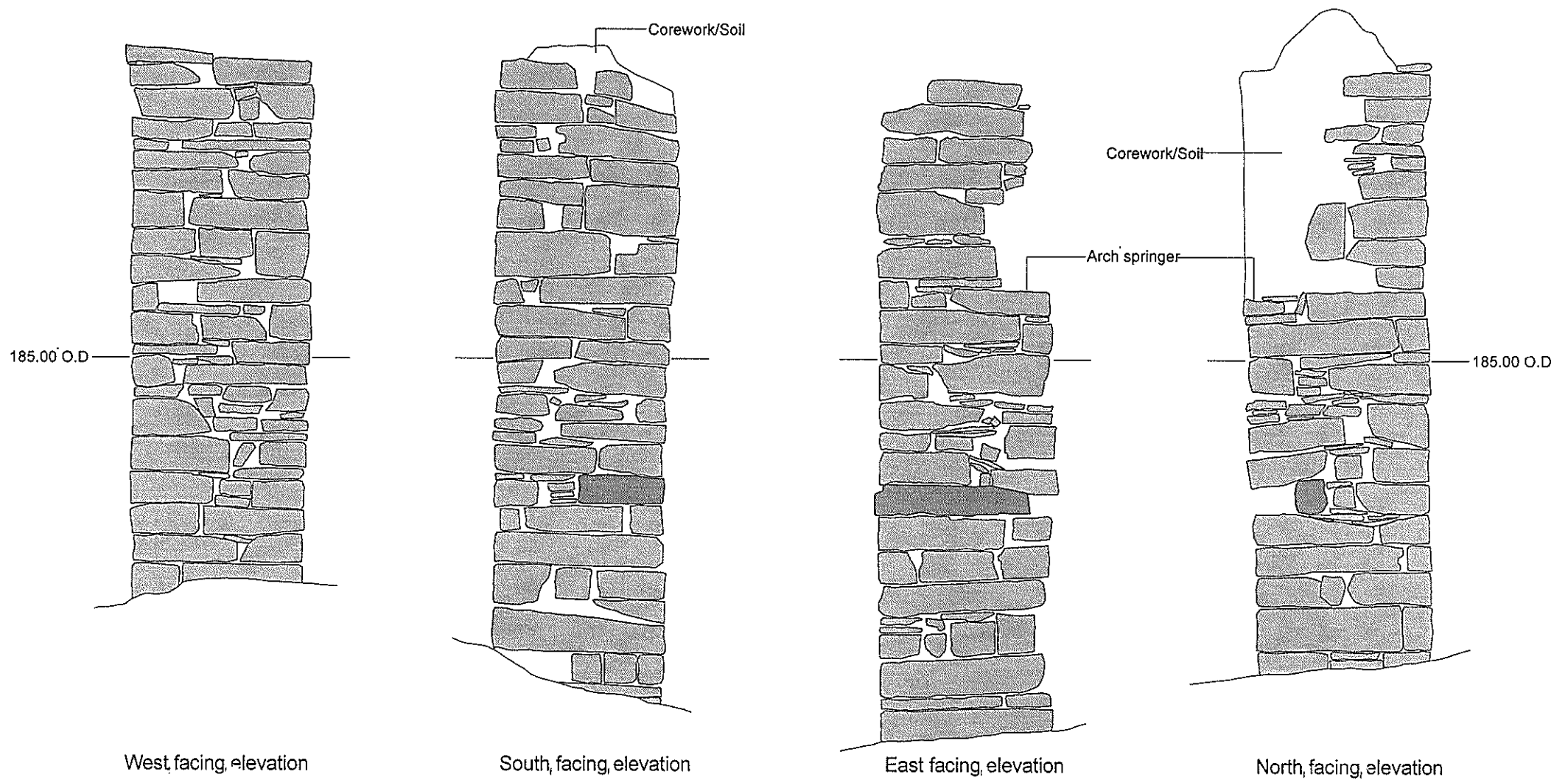
Fig. 3 Hafod : Gothic Arcade – Northwest pier



— Oolitic limestone

50' cm 0 50' cm

Fig.4 Hafod : Gothic Arcade – Southeast pier



— Oolitic, limestone

50' cm 0 50' cm

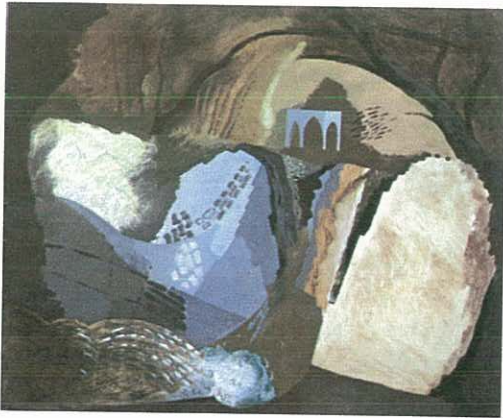


Illustration 1. John Piper's *Hafod: Nash Folly and Ystwyth Gorge* 1939, reproduced from Ingrams and Piper 1983, illus 109.

Illustration 2.
General view of the
Gothic Arcade from
the east prior to
recording. 14
November 2002.



Illustration 3.
General view of
the Gothic
Arcade from the
south prior to
recording. 14
November 2002.



Illustration 4. Northwest pier from the southeast. 14 November 2002.

Illustration 5. Southeast pier from the northeast. 14 November 2002.



Illustration 6. Southeast pier from the west. 14 November 2002.



Illustration 7. Southeast pier from the west. 14 November 2002.

Illustration 8. Fallen masonry of small north pier. 16 December 2002.



Illustration 9. Small south pier base. 16 December 2002.

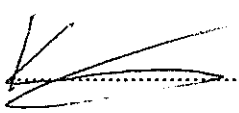
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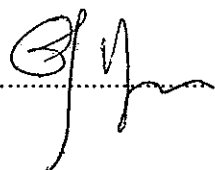
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Signature  Date 27/01/03

This report has been checked and approved by G Hughes on behalf of Cambria Archaeology,
Dyfed Archaeological Trust Ltd.

Position Trust Director

Signature  Date 27/01/03

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on the content or presentation of this report